CIRC ACCESSION NO--AP0112614
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION WAS STUDIED
MANOMETRICALLY.   POLY(PHENYLACETYLENE) (I) INHIBITS OXIDN. OF PH SUB2
CH SUB2.   INTRODUCTION PERIOD OF PH SUB2 CH SUB2 OXIDN. INCREASED
LINEARLY WITH I CONCN. ON REACTION WITH FREE RADICALS, ABSORPTION
COEFF. OF I DECREASED AT DIFFERENT WAVELENGTHS DIFFERENTLY. BEST
INHIBITORS ARE THE PARTS OF I MACROMOL. HAVING EXTENDED CONJUGATION.
DURING A REACTION OF I WITH PH SUB2 CH SUB2 THE CONCN. OF PARAMAGNETIC
CENTERS IN I DECREASED. ANALOGOUS EFFECTS WERE OBSERVED WHEN I WAS KEPT
IN THE PRESENCE OF AZOBISISOBUTYRONITRILE IN THE ABSENCE OF O.
FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW,
USSR.

UNCLASSIFIED

USSR

UDC: 621.391:519.2

ASLYEVA, T. B. and BYKHOVSKIY, M. A.

"Noise Immunity of Polarized Spaced Reception of Multifrequency Signals in the Short-Wave Range"

Tr. NII radio (Transactions of the Scientific Research Institute of Radio) 1970, No. 1, pp 65-76 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A45)

Translation: A formula is obtained for determining the noise immunity of a system of polarized space reception of multichannel signals in a multibeam channel with definite characteristics (the number of beams, their relative delay, and the state of polarization). Resume

1/1

USSR   UDC 621.355.2(088.8)

ASEYNBERG, E. Ye., CHERNYSHEV, I. I., KRYUCHKOV, A. V., BETS, D. I.,
MARSHEVA, Z. V.

"A Lead Battery"

Translation: In order to increase the specific electrical characteristics
and simplify the technology of manufacture of a lead battery, its body is
made as individual vessels connected by barriers, each of which is made as
a one-piece unit with the walls of the two neighboring vessels.

1/1

1/2   013   UNCLASSIFIED   PROCESSING DATE--16OCT70

TITLE--ANNULAR POLARIMETER FOR MEASUREMENTS OF NUCLEON POLARIZATION IN NUCLEAR REACTIONS -U-

AUTHOR-(05)-GEHLER, H., KRIVOPUSTOV, M., SCHIRMER, G., SISOV, I.W., ASFOUR, F.

COUNTRY OF INFO--USSR

SOURCE--NUCL. INSTRUM. METHODS: 77: 292-9(1970)

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--NEUTRON POLARIZATION, PROTON POLARIZATION, POLAR METER, MONTE CARLO METHOD, ELASTIC SCATTERING, ANGULAR DISTRIBUTION, NUCLEON INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1816   STEP NO--NE/0000/70/077/000/0292/0299

CIRC ACCESSION NO--AP0054650

UNCLASSIFIED

IRC ACCESSION NO--AP0054650

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF THE ANNULAR POLARIMETER FOR MEASURING THE NUCLEON POLARIZATION IN NUCLEAR REACTIONS IS DESCRIBED IN DETAIL AND ITS ADVANTAGES AGAINST THE USUAL LEFT RIGHT ASYMMETRY METHOD ARE SHOWN. THE CALCULATIONS OF THE GEOMETRICAL FACTOR AND THE AVERAGED ANALYZING POWER WERE CARRIED OUT USING THE MONTE CARLO METHOD. FOR AN EXAMPLE THE POLARIZATION OF PROTONS FROM THE REACTION PRIME12 C(PRIME3 HE, P SUBO) PRIME14 N(G.S.) AT E(PRIME3 HE) EQUALS 2.87 MEV WAS MEASURED AS A FUNCTION OF THE SCATTERING ANGLE USING THE ELASTIC SCATTERING PRIME12 C(P,P) PRIME12 C AS AN ANALYZER. FACILITY: JOINT INST, FOR NUCLEAR RESEARCH, DUBNA, USSR.

UNCLASSIFIED

ASHASTIN, R. L.

instrument making

USE OF AUTOMATED CONTROL SYSTEMS LEADS TO HIGHER PRODUCTIVITY

[Article by R. L. Ashastin; Baku, Vyshka, Russian, 21 March 1973, p 2]

The scientific and technical revolution places increased demands on the management of plants, associations, and entire sectors of industry. Automated control systems based on the use of electronic computing equipment have been and are being introduced at hundreds of enterprises throughout the country. With the aid of ASU's [automated control systems] the collectives of plants, factories, and firms are uncovering reserves for further increasing labor productivity, are improving product quality and work standards, and are conserving raw and other materials.

During the current five-year period it is planned to put into operation 1,800 automated control systems at the nation's enterprises. About 550 of them are being worked out by specialists of Soyuzsistemprom Association of the USSR Ministry of Instrument Making, Automation Equipment and Control Systems, R. L. Ashastin, the director of Soyuzsistemprom [explained] TASS correspondent B. Grishchenko about the main directions of this work and the problems of and prospects for further improvement of the management of enterprises and sectors.

instrument making

The All-Union industrial Economically Accountable Association for the Automation of Management was founded about 7 years ago and includes a number of large scientific research and planning institutes. They specialize in the development of automated systems for the management of sectors, enterprises, and projects in the nonindustrial sphere, such as large warehouses.

Experience has shown that it is economically unprofitable to create ASU's through the efforts of small subdivisions. Only large specialized organizations are capable of such a crucial task.

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JPRS 59233
8 Jun 73

Soyuzkistemprom specialists have now undertaken to work out the next segment of ASU-pribor, whose task is to expand greatly the capabilities of the first segment, already in operation.

While the system's main task in the initial stage was to provide the ministry's apparatus with current information on the production and economic activity of enterprises, later, with the aid of ASU-pribor, the forecasting of the operation of plants was started and the possibility appeared of opening better with all types of irregularities, and of establishing effective control over the activity of all enterprises. During the year in which the ASU has been in operation in the sector there have been no plants that have failed to meet plans for the production and sale of the most important products for the national economy.

The goal of optimizing and forecasting the most important indicators is being met in the development of the present segment of the sectorial ASU. For this purpose six ASU subsystems are being worked out now and the 10 already in operation will be improved and developed.

Implementation of a broad program for automating national economic management requires acceleration of the development of systems and a constant reduction of their cost. Soyuzkistemprom specialists are guided by this in their search for the most effective and rational methods of developing ASU's.

One such direction is the unification of ASU elements. So-called standard planning concepts -- full sets of working documents that can be used in the introduction of an ASU for an entire group of related enterprises -- are now being developed in the planning of automated systems.

The improvement of software is another possibility for intensifying work on the development of the systems. This link in the development of ASU's still remains the most costly and labor-intensive; the programming of problems for electronic computing equipment requires considerable inputs of time and funds. They can be reduced by automating the programming itself. Over the last several year programming systems have been worked out for several computers, including the Minsk-32, which is widely used by enterprises.

The first library of standard programs has been established. Elements of this collection can be used without change in development work on various ASU's. This reduces the labor-intensiveness of programming by 20-25 percent.

11,700
CSO: 1820-S

- 30 -

USSR   UDC 619:616.981.42-078:636.22/.28

MUFTEYEV, F. G. and KONOVALOV, I. F., Bashkir Scientific and Practical
Veterinary Laboratory, ASHATKIN, A. F., YUREYCHUK, V. P., and GUS'KOV, V. V.,
Primorskiy Kray

"Allergic Diagnosis of Brucellosis"

Abstract: The use of brucellin resulted in the detection of disesed cattle
that did not react serologically to brucellosis. In herds where the course of
the disease was acute, 7.8 to 24% more animals reacted positively to the prepa-
ration than in the agglutination and complement-fixation tests. Antibodies were
found in almost half of the positive within 15 to 30 days. Brucellin was in-
jected subcutaneously into the lower lid of one of the animal's eyes. A
positive reaction in a sick animal was manifested within 48 hours by pronounced
edema at the injection site, readily evaluated by inspection or palpation.

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1/2 039 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE WAYS OF PROPHYLAXIS AGAINST INFECTION OF THE OPERATIVE WOUNDS
-U-
AUTHOR-(02)-SHAFER, I.I., ASHATKIN, V.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP
9-12
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROPHYLAXIS, WOUND, SURGERY, UV IRRADIATION, SANITATION,
ANTIBIOTIC, ENOMYCIN, GLUE/(U)BF6 GLUE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1024 STEP NO--UR/0589/70/104/005/0009/0012

CIRC ACCESSION NO--AP0109175
UNCLASSIFIED

CIRC ACCESSION NO--AP0109175

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NUMBER OF MEASURES TO THE END OF COMBATING AGAINST INFECTION OF THE OPERATIVE WOUNDS AVAILABLE IN ANY SURGICAL DEPARTMENT ARE SUGGESTED, THEY ARE AS FOLLOWS: REGULAR SANATION OF THE NASAL CAVITY IN MEDICAL PERSONNEL, CONSTANT ULTRAVIOLET IRRADIATION OF ALL THE DIVISIONS OF THE OPERATION BLOCK, ARRANGEMENT OF A BORDERING SPACE BETWEEN THE LATTER AND A CORRIDOR LEADING TO THE SURGICAL DEPARTMENT, THE USE OF ANTIBACTERIAL SURGICAL GAUZE MASK, PROTECTION OF SKIN IN THE OPERATIVE FIELD BY A NEOPLAST FILM (PREPARATION CONSISTING OF BF-6 GLUE AND NEOMYCIN). THE USE OF SUCH MEASURES REDUCED NEARLY 6 TIMES THE INCIDENCE OF SUPPURATION OF THE OPERATIVE WOUNDS. FACILITY: KLINIKI OBSHCHEV KHIRURGII AND KAFEDRY MIKROBIOLOGII KRASNOYARSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR $\mathcal{A}$ UDC 621.385.2

AFANASOV, S. G., ASHBEL', I. YA.

"Distinctive Feature of Impedance Characteristics of Spherical Diode with External Cathode"

Translation: A computation is performed for the impedance characteristics of a spherical diode (SD) with an external cathode (i.e., computation of the active and reactive components of the impedance of a diode) with the assumption of smallness of the high-frequency disturbing effect with respect to the d-c voltage of the SD. A comparison of the computed impedance characteristics of a SD with the corresponding characteristics of a plane diode shows that with a SD with an exterior cathode, the negative active component of the impedance is considerably larger with respect to absolute magnitude. The possibility is considered of the practical use of SD as a reactive element for control of frequency oscillatory systems. 4 ref. Summary.

1/1

Public Health, Hygiene and Sanitation

ASHBEL', S. I., ORESHKOVICH, I. V., and SOKOLOVA, V. G., Gor'kiy Institute of Labor Hygiene and Occupational Diseases

"Ventilation of Aerosol Inhalation Rooms"

Abstract: The method of treating various diseases by letting patients inhale the aerosols of alkalis, antibiotics, sulf-anylamides, bronchodilators, antihistamine, vitamins, cortico-steroids, proteolytic enzymes, and other drugs is becoming increasingly more popular. Twenty inhalation rooms in the city of Gor'kiy were studied and found far from adequate. Each inhalation room accommodates three to six persons, each breathing a different aerosol. Because of poor ventilation, significant residual amounts of various drugs remain in the air, yielding an "aerosol bouquet" and causing chronic diseases among the personnel. In contrast, the authors describe the inhalation room designed by them. It contains several individual chambers
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USSR

which are closed during treatment, and a ventilation system
which is properly installed and has enough power to purify the
air. This inhalation room has been used for 2 years with highly
satisfactory results.

2/2

TITLE--PATHOLOGICAL CHANGES OF THE CARDIO VASCULAR SYSTEM CAUSED BY
   ANTIBIOTICS -U-
AUTHOR-(02)-ASHBEL, S.I., BOGOSLOVSKAYA, I.A.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 4, PP 55-59

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DRUG INDUSTRY, ANTIBIOTIC, CARDIOVASCULAR SYSTEM, SELECTIVE
   DRUGEFFECT, ELECTROCARDIOGRAPHY, INDUSTRIAL MEDICINE, PENICILLIN,
   STREPTOMYCIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1452   STEP NO--UR/0504/70/042/005/0055/0059

CIRC ACCESSION NO--AP0133390
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0133390
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS EXAMINED 215 PATIENTS
(PERSONS ENGAGED IN PENICILLIN AND STREPTOMYCIN PRODUCTION AND NURSES)
SUFFERING FROM OCCUPATIONAL DISEASES CAUSED BY THE MENTIONED ANTIBIOTICS
AND FOUND PATHOLOGICAL CHANGES IN THE MYOCARDIUM AND VESSELS IN A GREAT
NUMBER OF CASES. THE PATIENTS COMPLAINED OF PATHOLOGICAL SENSATIONS IN
THE HEART, AND ELECTROCARDIOGRAPHIC STUDIES REVEALED VARIOUS CHANGES IN
THE MAJORITY OF PATIENTS (63.7PERCENT). ALMOST HALF OF THE PATIENTS
DEMONSTRATED BALLISTOCARDIOGRAPHIC CHANGES OF THE II.III AND IV DEGREE
ACCORDING TO BROWN'S CLASSIFICATION. ARTERIAL DYSTONIA, IN MOST OF THE
CASES RUNNING A HYPERTENSIVE TYPE COURSE, WAS REVEALED IN 25PERCENT.
THERE WERE OFTEN OBSERVED DISORDERS OF PERMEABILITY AND A LESSENING OF
THE CAPILLARY ELASTICITY. THE ABOVE MENTIONED PATHOLOGICAL CHANGES OF
THE CARDIOVASCULAR SYSTEM DEVELOPED IN COMBINATION WITH OTHER
PATHOLOGICAL CHANGES OCCURRING IN DIFFERENT ORGANS IN PRACTICALLY
HEALTHY PERSONS.   FACILITY: KLINICHESKIY OTDEL GOR'KOVSKOGO N-I
INSTITUTA GIGIYENY TRUDA I PROFZABOLEVANIY MINISTERSTVA
ZDRAVOOKHRANENIYA RSFSR.

UNCLASSIFIED

USSR

ASHCHEULOVA, Ye. N., All-Union Research Institute of Physical Culture

"Determination of the Acid-Base Equilibrium of the Blood as an Index of General Endurance After Exposure to Hypoxia"

Abstract: The acid-base equilibrium was investigated in a group of veteran mountain climbers after treadmill tests before and after prolonged exposure to low barometric pressure (spending 30 days at 4,000 to 6,000 m above sea level). Before the men went into the mountains, their performance in the endurance tests was marked by a significant lowering of the blood pH by 0.08 unit; a 2.5-fold increase in the content of nonoxidized metabolic products, and a 10% decrease in the standard bicarbonates below the original values, evidence of the development of decompensated metabolic acidosis after physical stress. Following the stay in the mountains, endurance increased substantially. The blood pH was virtually unchanged and the oxygen demand increased only 2.7% while the oxygen debt decreased 17%. Thus, the well-known phenomenon of improved physical performance after exposure to low barometric pressure is related to change in tissue metabolism.

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USSR

UDC: 621.396.69:621.319.4

ASEYEV, Yu. N., KRYACHKO, V. V., LOBOV, I. Ye., SYNOROV, V. F., KOSOY, A. Ya.

"A Thin-Film Capacitor"

Translation: This Author's Certificate introduces a thin-film capacitor
in the form of metal plates (e. g. comb plates) applied to a dielectric
substrate and covered with a layer of dielectric material. As a distin-
guishing feature of the patent, the capacitance is increased without in-
creasing the area of the plates by applying a layer of metal to the dielec-
tric.

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USSR   UDC: 621.395.657.4

ASEYEV, Yu. P., BELOUSOV, I. V.

"Electric Pulse Counter"

USSR Author's Certificate Number 310408, filed 29/03/68, published 27/08/71 (trans-
lated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya
Tekhnika, No 3, 1972, Abstract No 3 A369 P)

Trans: The authors suggest an electric pulse counter, based on electromagnetic
relays with strobing of the input signal of each cell by the relay contact, in
which the output of each cell is connected through tubes to the input of the
preceding and succeeding relays, while the switching contacts of even and odd
relays, which strobe the input signals, are connected into two independent
electrical circuits, connected at one end to the power supply through a switching
contact. In order to simplify the device, the other ends of these circuits of
the series-connected contacts of odd and even relays are connected to the outputs
of the first and second counter cells respectively. 1 figure.

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USSR

ASHEROV, A. T., ZABRODSKIY, V. A.

"Monitoring the Production Process in an Automated Control System"

Translation: The paper formulates the problem of simultaneous optimization of processes of production monitoring and selection of controls from the results of prediction for quota fulfillment under automated enterprise management conditions. Monitoring of production output is treated as a controlled semi-Markov process. The structure of the transition interval is considered as well as the structure of income and management; a solution is found for the problem of selecting optimum strategies of inspection and prediction by the method of dynamic programming. Possible applications are discussed.

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USSR   UDC: 51

ASHEROV, A. T. and ZABRODSKIY, V. A.

"Control of the Production Process in an Automated Control System"

Translation: The problem of the combined optimization of production
control processes and the choice of control from the results of a
prognosis for fulfilling a specified plan is formulated for condi-
tions for automating a system of controlling an enterprise. Con-
trol of the start of production is considered to be a controllable
Markov process. The structure of the transition interval, of the
income, and of the control, is considered; a solution is given to
the problem of the optimal control strategy and prognosis by the
method of dynamic programming. Possible applications are discussed.
Authors' abstract

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USSR

ASHEROV, A. T.

"Selection of Strategies for the Supervisory Program in a Computer Complex in an Automated Enterprise Control System"

Translation: This work is dedicated to the construction and analysis of a model of the actual functioning of a technical-economic control system. The process of actual functioning of the system is looked upon as a sequence of regulated (regular) and unregulated (irregular) operations. The unregulated operations, as a rule, are related to solution of economic problems, realization of interrogation-response connections for restoration of the working ability of computer devices. This article presents a mathematical model of the process of reordering of schedules of regulated operations, postulates an approach structure, describes a mechanism for selection of supervisory program strategies, and also studies problems of the construction of an

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Simulations

Abstract: The paper gives a formalized description of organizational sys-
tems and subsystems as sets of elements ordered in a certain way using two
general approaches: a) the system is defined as a set of objects which
has predefined properties with fixed relations among them; b) the system
is defined as a set of objects on which a predefined relation is realized
among fixed properties. These approaches can be used to isolate two kinds
of functional subsystems on any hierarchical level of an organizational
system for control of an industrial enterprise -- factoral and procedural.
Categories of control problems are considered, and it is shown that the
functional structure of such a problem can be defined in terms of the con-
trolling link in a closed feedback loop. A model is described which was
used in developing the automated control systems of the West Siberian

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USSR

KOSHARSKIY, B. D. et al., Mekhanizatsiya i Avtomatizatsiya Upravleniya,
No 1, Jan/Feb 73, pp 18-26

Metallurgical Plant and the Izyumsk Instrument Making Plant. Practice has
shown that the model is sufficiently general for control problems at all
hierarchical levels and meets the requirements of engineering practice.

USSR

KOSHARSKIY, B. D., ASHEROV, A. T.

"Models of Functioning of the Automated Enterprise Control System"

No abstract

1/1

USSR   UDC 51

KOSHARSKIY, B. D., ASHEROV, A. T., TIMOSHENKO, A. N., TIMCHENKO, N. D., MELYUSH-
KINA, L. P.

"Problem of Selecting the First Stage of an Automated Enterprise Control System"

Translation: The problem of selecting the first stage of automation when in-
troducing an automated enterprise control system is formulated. Possible
optimalness and restriction criteria, possible statements of the problem and
the statement used in the present paper, the method of solution and the results
of experimental research for the Western Siberian Metallurgical Plant are
presented.

1/1

USSR   UDC 577.4

KOSHARSKIY, B. D., ASHEROV, A. T.

"Some Problems of Simulating the Dynamic Structures of Regular Automated Technical-Economic Systems by the Methods of Automaton Theory"

V sb. Avtomaty, gibridn. i upravlyayushch. mashiny (Automata, Hybrid and Control Machines -- collection of works), Moscow, Nauka Press, 1972, pp 113-120 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V336)

No abstract

1/1

USSR

UDC: 51

ASHEROV, A. T.

"Information Ranks of Jobs in an Automated System of Enterprise Management"

Mekhaniz. i avtomatiz. upr. Nauch.-proizv. sb. (Mechanization and Automation of Control. Scientific-Production Collection), 1971, No 6, pp 18-20 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V470)

Translation: The formal idea of the level and information rank of jobs is introduced. An algorithm is presented for determining the information rank of jobs, together with the results of its practical use. Author's abstract.

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USSR   UDC: 51

KOSHARSKIY, B. D., ASHEROV, A. T., SKOROBOGATOV, M. S.

"Prediction of Conflict Problems of Operational Control in Automated Technical-Economic Systems"

V sb. Operativn. upr. proiz-vom (Operational Control of Production-- collection of works), Moscow, "Nauka", 1971, pp 51-59 (from RZh-Kiber- netika, No 4, Apr 72, Abstract No 4V504)

Translation: Extraformalistic control problems belonging to the category of conflict problems are considered. The causes giving rise to conflict problems are analyzed, as well as questions of determining the random number of conflict problems over a certain period, determining the sta- bility of the established order of operation of the computing center of an automated control system for management, optimum planning, and account- ing for conflict problems Authors' abstract.

1/1

68942a   Effect of errors during the determination of carbon on
the accuracy of calculations of mechanically incomplete mazut
combustion. Kovbasyuk, A. S.; Geller, Z. I.; Ashikhmina,
N. M. (Odess. Tekhnol. Inst. Pishch. Kholod. Prom., Odessa,
USSR). Teploenergetika 1970, 17(1), 70-8 (Russ). The errors
assocd. with the title method (Vnukov, Goikhman, Madoyan,
and Migalin, 1966) are evaluated. The method consists of trap-
ping the foots and detn. of their C content by combustion to
CO_2 at 700°. The CO_2 is absorbed by an excess of a soln. of
$Ba(OH)_2$, which is then back titrated by HCl. A detailed anal. of
errors was carried out.   M. Shelef

REEL/FRAME
19740948

CHARACTERIZATION OF BIOCHEMICAL SHIFTS IN EXPERIMENTAL B6-HYPOVITAMINOSIS

Karkalitskiy, I. M.; Karkalitskaya, G. V.; Ashikhmina, Ye. M.; Kovrizhnykh, N. D.; Tuzova, G. P.; Plotnikova, G. F.; Berdnikov, M. P.

Tubazid in an amount of 100 mg was administered daily intramuscularly for 7 weeks to nuria cospus to produce pyridoxine deficiency. The earliest sign of B6-hypovitaminosis was diminished passage of 4-pyridoxine acid with the urine, whose week-wise fluctuations were of an undulating nature. The blood serum of animals with pyridoxine deficiency showed a fall of α- and β-globulins, a rise of albumins, declined activity of the aspartate-aminotransferase, unchanged activity of the alanine-aminotransferase and an increase of β-lipoproteids in the blood serum and tissues. The animals also developed fatty degeneration of the liver, kidneys and fatty infiltration of aortic walls. Furthermore, they exhibited symptoms of B6-hypovitaminosis, such as poor appetite, loss of weight, skin lesions on the tip of the nose, focal affection of the skin around the eyes, bilateral paresis of hind legs, epileptiform seizures and symmetric lamellar desquamation of the skin in hind paws and diminished passage of riboflavin with the urine. All of the listed deviations are corrected following administration of vitamin B6 to the animals.

USSR   UDC 546.26;118.07

RYSKULOV, T., BEYSHEKEYEV, ZH., KOZHAKHMETOVA, R., DZHULDUBAYEV, K., and
ASHILBAYEVA, B., Institute of Organic Chemistry, Academy of Sciences Kirgiz.
SSR

"Organophosphorus Derivatives of Piperazines"

Abstract: Reaction of monosubstituted amyl- and benzylpiperazines with phos-
phonic acid dichlorides and phenylamidophosphoric acid chloride in presence
of dry triethylamine yields novel amidophosphonates and amidophosphates. All
of the amidophosphonates are crystalline products; the di(1-amylpiperazinyl-
4)phenylamidophosphate is an oily product which can be isolated by conversion
to a picrate. Another possible synthetic method for amidophosphates is based
on the reaction of monoamylpiperazine with dialkyl(aryl)phosphoric acid
chlorides in benzene and in presence of dry triethylamine.

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Rubber and Elastomers

USSR   UDC 661.185.1

ASHIMOV, M. A., MURSALOVA, M. A., SADYKH-ZADE, S. I., and AKHMEDOV, G. G.,
Sumgait Branch INKhT, Acad. Sc., AzerbSSR

"Study of the Utilization of Biodegradable Alkylarylsulfonate INKhP-9 as an
Emulsifier During Production of Butadiene-nitrile Rubber"

Baku, Azerbaydzhanskiy Khimicheskiy Zhurnal, No 1 (73), 1971, pp 64-66

Abstract: The copolymerization of butadiene and acrylonitrile was studied as
a function of the amount of a new biodegradable emulsifier INKhP-9 used and
of the reaction time. INKhP-9 is the sodium salt of a mixture of 75-78% of
mono-, 15-18% of the di- and 4-10% of the trialkylaranesulfonic acids obtained
by alkylation of benzene with normal-α-olefines containing 6-14 carbon atoms
in presence of $AlCl_3$ or H_2SO_4. Increasing the amount of INKhP-9 from 2.2 parts
by weight·hr to 3.8 and 4.2 results in 82, 77, and 65% copolymerization in 8 hrs
respectively. However, the latex obtained with the lowest level of INKhP-9 is
not stable. The higher concentrations of INKhP-9 give a sufficiently rapid
process and a stable latex product which compares favorably with the commer-
cially produced rubber SKN-26.

1/1

USSR

UDC: 621.382.33

ASHIMOV, N. M.

"Effect of the Distributed Base Resistance on the Input Charac-
teristics of a Transistor With Ribbon Construction"

Moscow, Radiotekhnika, No 2, 1972, pp 84-89

Abstract: The ribbon construction of the transistor under consi-
deration is defined as a geometry in which the emitter and base
contacts are in the form of two parallel bands. An explanatory
diagram of this type of construction is also given. The effect
of the base resistance volume distribution for such a transistor
is investigated under the following assumptions: that there is no
emitter injection into the passive region of the base nor is there
any resistance in the passive region; that the width of the base
is uniform throughout its length; that there is no variation in
the resistance of the base region nor is there a longitudinal
electric field in the base; that the transistor α factor is in-
dependent of the emitter current. New expressions are obtained
for the input characteristic of the transistor with short-
circuited and switched-in collector, and for the base resistance
as a function of the current. The author finds that the

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distributed base resistance can practically be regarded as a quasi-junction, introduced into the equivalent circuit of the transistor, whose saturation current is a function of the geometry and resistivity of the base and is much greater than the saturation current of the emitter junction.

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USSR   UDC 621.039

ASHIROV, E. G., GUREVICH, L. G., and ZINOV'YEV, N. F.

"Application of a Polynomial Approximation of Fast Neutron Spectra for Analysis of the Results of the Activation of Threshold Detectors"

V sb. Radiats. dozimetriya i spektrometriya ioniziruyushch. izluch. (Radiation Dosimetry and Spectrometry of Ionizing Radiation -- Collection of Works), Tashkent, "Fan," 1970, pp 230-234 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V578)

Translation: The fast neutron spectrum in a vertical channel of the VVR-S reactor was investigated with the aid of a set of six threshold indicators of In^{115}, Ni^{58}, Zn^{64}, Mg^{24}, and Al^{27} (n, p and n, α reactions). The polynomial approximation of the spectrum was used: $\Phi(E) = \alpha_1 e^{-3} + \alpha_2 e^{-2} + \ldots \alpha_6 e^2$. The dependence of the reaction cross sections on E was also approximated by polynomials. This representation of the spectrum was unsuccessful, since negative values of $\Phi(E)$ were obtained in the region E = 1.5-3 Mev. There were considered 22 combinations of the polynomial representation of the spectrum, the function $\Phi_0(E)$ describing the fission spectrum, and the exponential function $c(E) = \exp(E - \sqrt{2E})$. Considerable discrepancies were 1/2

USSR

ASHIROV, E. G., et al, Radiats. dozimetriya i spektrometriya ioniziruyushch. izluch. (Radiation Dosimetry and Spectrometry of Ionizing Radiation -- Collection of Works), Tashkent, "Fan," 1970, pp 230-234 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V578)

obtained in the spectra found from the spectra calculated for the vertical channels of the reactor. The best approximation to the calculated spectrum using the spectrum found was obtained by the use of a simple approximation $\Phi(E) = (\alpha_1/E) + \alpha_2 \Phi_0(E)$; this is explained by the similarity of the form of the spectrum in water-water reactors to the fission spectrum.

2/2

- 76 -

Functional Analysis

USSR

UDC 518:517.948

ASROROV, YA., and ASHIROV, O., Turkmen State University imeni A. M. Gor'kiy

"Convergence of Certain Iterative Processes for the Solution of Systems of Operator Equations"

Abstract: In the present article, various sufficient conditions for the existence of a solution to systems of operator equations of the following type are found:

$$x = F(x,y)$$
$$y = G(x,y).$$

The operators $F(x,y)$ and $G(x,y)$ are defined over $S X S_1$, where S and S_1 are closed spheres from a Banach space. It is established that the solution to the given system of equations is the limit of certain successive approximations, and the speed with which these approximations converge to the solution is determined. When conditions are such that the system can be broken down into two independent operator equations, then from one of the theorems proven in the article one can obtain as a particular case the principle of contractive mappings (for

1/2

USSR

ASROROV, YA., and ASHIROV, O., Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Fiziko-Tekhnickeskikh, Khimicheskikh i Geologicheskikh Nauk, No 3, 1971, pp 14-20

the first equation) and the principle of majorants (for the second equation). In practical work, a system of operator equations of the following form is often encountered:

$$x = F(x,y)$$
$$P(x,y) = 0.$$

It is easy to verify that this sytem may be written in the form of the system indicated above and the results obtained above will apply to it.

2/2

1/3   028   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--EFFECT OF THE F2 LAYER ON IONOSPHERIC SCATTERING LINES (D IS LESS
  THAN 2,000 KM) IN THE SHORT WAVE FREQUENCY RANGE -U-
AUTHOR--ASHKALIYEV, YA.F.

COUNTRY OF INFO--USSR

SOURCE--IONOSPHERIC SECTION, ACADEMY OF SCIENCES KAZAKH SSR; MOSCOW,
  GEOMAGNETIZM I AERONOMIYA, VOL X, NO 2, 1970, PP 350-351
DATE PUBLISHED-------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--F LAYER, IONOSPHERIC SCATTER, ELECTRON DENSITY, CRITICAL
  FREQUENCY, D LAYER, E LAYER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1674   STEP NO--UR/0203/70/010/002/0350/0351

CIRC ACCESSION NO--AP0109662
                  UNCLASSIFIED

2/3   028
CIRC ACCESSION NO--AP0109662
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ULTRASHORT WAVELENGTHS ARE NOW
USED ON IONOSPHERIC SCATTERING LINES; IN THIS RANGE F SUB2 GREATER THAN
ALPHA F SUB0 F, WHERE F SUBW IS THE WORKING FREQUENCY.   ALPHA IS THE
ANGLE OF INCIDENCE ON THE F2 LAYER. F SUB0 F IS THE CRITICAL FREQUENCY
OF THE F2 LAYER.   THE OBSERVED WEAK BUT CONSTANTLY EXISTING SIGNAL
LEVELS ARE INTERPRETED AS SCATTERING ON IRREGULARITIES OF ELECTRON
DENSITY IN THE D E REGIONS OF THE IONOSPHERE (H EQUALS 75-90 KM). WITH
TRANSITION TO LOWER FREQUENCIES (SHORT WAVES) ABSORPTHION IN THE D LAYER
CEASES TO BE NEGLIGIBLE. THERE IS BASIS FOR EXPECTING THAT
IRREGULARITIES OF ELECTRON DENSITY IN THE F2 REGION WILL EXERT A
DECISIVE EFFECT ON SIGNAL STRENGTH AT THE RECEPTION POINT. IF SHORT
WAVES ARE USED ON IONOSPHERIC SCATTERING LINES, DURING CERTAIN TIMES MUF
F2 (MAXIMUM FREQUENCY, F2 LAYER) CAN BE COMMENSURABLE WITH THE WORKING
FREQUENCY. THEN PART OF THE INCIDENT STRENGTH CAN BE REFLECTED FROM
THOSE INHOMOGENEITIES FRO WHICH AT THE PARTICULAR TIME THE ELEMENTARY
MUF IS GREATER THAN OR EQUAL TO THE WORKING FREQUENCY. ON THE BASIS OF
THREE YEARS OF OBSERVATIONS OF RADIO WAVE PROPAGATION AT FREQUENCIES
GREATER THAN MUF F2 IN THE RANGE 9-19.8 MC-SEC, THE AUTHOR FOUND THE
EXPERIMENTAL DEPENDENCE OF DECREASE IN SCATTERED POWER ON EXCESS OF THE
WORKING FREQUENCY OVER MUF F2. IN THE STUDY A WORKING FREQUENCY OF 16.2
MC-SECWAS USED AND OBSERVATIONS WERE MADE ONLY FROM 2000 TO 1200 HOURS.
IT WAS FOUND THAT DURING THE EVENING AND MORNING HOURS THE SCATTERING
FROM TWO REGIONS (D E AND F2) MUST BE CONSIDERED.

3/3   028   UNCLASSIFIED   PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109662

ABSTRACT/EXTRACT--DURING THESE PERIODS THE CONTRIBUTION FROM THE F2 LAYER CAN BE COMMENSURABLE WITH NORMAL SCATTERING OF THE LOWER IONOSPHERE. ON IONOSPHERIC SCATTERING LINES (D IS LESS THAN 2,000 KM), OPERATING IN THE SHORT WAVE FREQUENCY RANGE, IT IS NECESSARY TO TAKE SCATTERING FROM THE F2 REGION INUT ACCOUNT WHEN F SUBW IS LESS THAN OR EQUAL TO 1.4 MUF-F2.

89

UNCLASSIFIED

1/2   036   UNCLASSIFIED   PROCESSING DATE--11DEC70
TITLE--RADIO WAVE PROPAGATION AT FREQUENCIES ABOVE THE F2 MAXIMUM USABLE
FREQUENCY IN THE SHORT WAVE REGION -U-
AUTHOR-(02)-ASHKALIYEV, YA.F., BOCHAROV, V.I.

COUNTRY OF INFO--USSR

SOURCE--MORPHOLOGY OF THE QUIET AND PERTURBED IONOSPHERE (A70-36084 18-13)
ALMA-ATA IZDATEL'STVO NAUKA (AKADEMIIA NAUK KAZAKHSKOI SSR, SEKTOR
DATE PUBLISHED--------70

SUBJECT AREAS--NAVIGATION, ATMOSPHERIC SCIENCES

TOPIC TAGS--RADIO WAVE PROPAGATION, F LAYER, E LAYER, DIURNAL VARIATION,
IONOSPHERIC SCATTER COMMUNICATION, SEASONAL VARIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605029/B07 STEP NO--UR/0000/70/001/000/0062/0066

CIRC ACCESSION NO--AT0141678
                            UNCLASSIFIED

CIRC ACCESSION NO--AT0141678

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF FIELD INTENSITY AND
SNR MEASUREMENTS PERFORMED OVER EXPERIMENTAL SHORT WAVE IONOSPHERIC
SCATTER COMMUNICATION LINES.   IT IS SHOWN THAT THE SEASONAL AND DIURNAL
VARIATIONS OF THE FIELD INTENSITY ARE DIRECTLY RELATED TO THE SEASONAL
AND DIURNAL VARIATIONS OF SOLAR AND METEOR ACTIVITY. THE INFLUENCE OF
REFLECTION FROM THE SPORADIC E LAYER ON THE PROPAGATION OF SHORT RADIO
WAVES AT FREQUENCIES ABOVE THE MAXIMUM USABLE FREQUENCY OF THE F2 LAYER
IS EXAMINED. WHEN PENCIL BEAM TRANSMITTING ANTENNAS AND 20 KW
TRANSMITTERS ARE EMPLOYED, THE MEAN SNR VALUE IS NEVER LESS THAN 20 DB,
EVEN IN SEPTEMBER (WORST PROPAGATION CONDITIONS).

UNCLASSIFIED

TITLE--CROWDING OF THE RADIO FREQUENCY SPECTRUM IN THE BAND BETWEEN 16 AND
  25 MHZ -U-

AUTHOR-(02)-ASHKALIYEV, YA.F., BUCHAROV, V.I.

COUNTRY OF INFC--USSR

SOURCE--IN: MORPHOLOGY OF THE QUIET AND PERTURBED IONOSPHERE (A70-36084
  18-13) AKADEMIIA NAUK KAZAKHSKOI SSR, SEKTUR IONOSFERY, TRUDY, VOLUME 1)

DATE PUBLISHED-------70

SUBJECT AREAS--NAVIGATION, ATMOSPHERIC SCIENCES

TOPIC TAGS--IONOSPHERIC SCATTER COMMUNICATION, RADIO COMMUNICATION, F
  LAYER, SOLAR ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605029/607 STEP NO--UR/0000/70/001/000/0067/0072

CIRC ACCESSION NO--AT0141679
                         UNCLASSIFIED

2/2   035
CIRC ACCESSION NO--AT0141679
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF RECORDINGS OF ALL STATIONS TRANSMITTING IN THE 16 TO 23 MHZ BAND, PERFORMED CONTINUOUSLY THROUGHOUT 1965 IN ORDER TO ASSESS THE INTERFERENCE TO BE EXPECTED FOR SHORT WAVE IONOSPHERIC SCATTER RADIO COMMUNICATIONS AND TO STUDY THE ACTUAL CROWDING OF THIS BAND. IT IS FOUND THAT THERE EXISTS A DISTINCT RELATIONSHIP BETWEEN THE NUMBER OF RADIO STATIONS AND THE BEHAVIOR OF THE MAXIMUM USABLE FREQUENCY OF THE F2 LAYER; THESE FREQUENCIES ARE USUALLY BELOW 16 MHZ DURING MINIMUM SOLAR ACTIVITY AND AT NIGHTTIME. WAVELENGTHS FREE OF INTERFERENCE ARE STILL AVAILABLE IN THE BAND BETWEEN 18 AND 23 MHZ.

USSR

UDC 621.396.677

ASHKENAZI, D. YA., BRODULENKO, G. I., BELYAYEVA, G. N., KALMYKOVA, T. A.

"Push-In Lightning Arrester with a Capillary"

Translation: This article contains an investigation of the use of a capillary as one of the elements of a wide-band lightning arrester which is installed in a wave guide filter or resonator. The capillary is coupled to the wave guide via a cylindrical housing in which the capillary is fastened. The design of the discharger permits combination of small losses and small recovery time inherent to a capillary discharger with high mechanical strength and convenience of replacement during operation. There are two illustrations and a one-entry bibliography.

1/1

- 17 -

1/2   023   UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--EXPERIMENTAL PROOF ON THE APPLICABILITY OF A FOURTH DEGREE
   POLYNOMIAL FOR DESCRIBING THE SURFACE OF EQUALLY CRITIAL PLANE STRESSED
AUTHOR-(02)-ASHKENAZI, YE.K., PEKKER, F.P.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(2), 284-94

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CALCULATION, MECHANICAL STRENGTH, GLASS FIBER, REINFORCED
   PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1120   STEP NO--UR/0374/70/006/002/0284/0294

CIRC ACCESSION NO--AP0124775
                        UNCLASSIFIED

UNCLASSIFIED

CIRC ACCESSION NO--AP0124775

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE 4TH DEGREE POLYNOMIAL WHICH WAS PROPOSED EARLIER (E. K. ASHKENAZI, 1967) FOR THE ENGINEERING CALCN. OF THE STRENGTH OF GLASS FIBER REINFORCED PLASTIC TUBING WAS TESTED EXPTL. ONLY THE TENSILE STRENGTHS AT YIELD IN PARALLEL, AT 45DEGREES, AND AT 90DEGREES TO THE TUBE AXIS AND THE SHEAR MODULI OF THE SAMPLES ARE REQUIRED TO OBTAIN THE LONG TERM DURABILITY. FACILITY: LENINGRAD. LESOTEKH. AKAD. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

USSR   UDC: 622.011.43

KULIYEV, A. K., ASKEROV, F. A., IMANOV, A. A.

"Studies of the Mechanical Properties of Rocks by the Method of Punch Identation Under a Lateral Pressure of up to $2.74 \cdot 10^8$ N·m^{-2}"

V sb. Bureniye i razrabotka glubokozalegayushchikh neftegaz. mestorozhd. (Drilling and Working Deep Petroleum and Gas Deposits--collection of works), Baku, "Elm", 1972, pp 64-70 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7V621)

Translation: The paper deals with destruction of rocks by a boring tool in different stressed states. In a series of experiments cylindrical rock specimens were loaded by pressure on the lateral surface. The end faces were indented by flat punches. It was found that with an increase in lateral pressure up to a certain value for each rock, the values of hardness and yield stress change basically only slightly, while a further increase in lateral pressure leads to an increase in these characteristics. The volume of rock destroyed under the punch increases with lateral pressure considerably faster than the increase in hardness. Bibliography of six titles. A. B. Fadeyev.

1/1

USSR

ASHKENAZY, V. O.

"Some Problems of Statistical Estimation of the Location of Signal Sources in a Dispersing Medium"

Abstract: The author considers the problem of optimum accounting for the dispersive properties of the propagation medium in statistical estimation of the coordinates of a source of signals which are being received against a background of random interference. Computational relations are found and an analysis is made of the accuracy characteristics of single-point and multipoint spectral dispersion measurement systems.

1/1

COLLECTIVE PROPERTIES OF EXCITONS IN SILICON

Ashkinadze, B. M.; Kretsu, I. P.;
Ryvkin, S. M.; Yaroshetskiy, I. D.

Recombinational radiation for high injection levels is investigated. It is shown that then the exciton density is high their collective interactions become important. At low temperatures (below $20°$ K) these lead to the formation of exciton «drops». At higher temperatures the formation of exciton associations, which are drop embryos, becomes possible.

1/1   2/DI

REEL/FRAME
19770066

A

69113t Study of the kinetics of radiogenic gas emanation by annealing of uraniferous minerals. Ashkinadze, G. Sh. (Inst. Geol. Geochronol. Precambrian, Leningrad, USSR). *Geokhimiya* 1970, (1), 104–11 (Russ). The kinetics of radiogenic Xe and He emanation during the thermal annealing of a group of minerals of the phosphate and titano-tantalo-niobate group has been investigated. Minerals of the phosphate class are characterized by a high value of activation energy emanation of main Xe amts. (>120 kcal/mole). Metamictization of the initial cryst. structure leads to the appearance of weakened structure sections from where the emanation of gases occurs at lesser activation energies. The investigated titano-tantalo-niobates are metamict (according to DTA data). Gas emanation during their annealing occurs in 2 stages.   BLJR ⌐

Acc. Nr.   Abstracting Service: Ref. Code
AP0036345   CHEMICAL ABST. 4-70   UR 0007

A

69113t **Study of the kinetics of radiogenic gas emanation by annealing of uraniferous minerals.** Ashkinadze G. Sh. (Inst. Geol. Geochronol. Precambrian, Leningrad, USSR). *Geokhimiya* 1970, (1), 104-11 (Russ). The kinetics of radiogenic Xe and He emanation during the thermal annealing of a group of minerals of the phosphate and titano-tantalo-niobate group has been investigated. Minerals of the phosphate class are characterized by a high value of activation energy emanation of main Xe amts. (>120 kcal/mole). Metamictization of the initial cryst. structure leads to the appearance of weakened structure sections from where the emanation of gases occurs at lesser activation energies. The investigated titano-tantalo-niobates are metamict (according to DTA data). Gas emanation during their annealing occurs in 2 stages.   BLJR

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16

REEL/FRAME
19721183

USSR   UDC 550.89

ASHKINADZE, G. SH., Institute of Precambrian Geology and Geochronology,
Academy of Sciences USSR, Leningrad

"Kinetic Study of Radiogenic Gas Emanation in Thermal Annealing of
Uraniferous Minerals"

Abstract: The authors studied the behavior of radiogenic helium and
xenon in the thermal annealing of uraniferous phosphates and titano-
tantalo-niobates. The method of stepwise isochronous annealing was
used to study the kinetics of xenon emanation, the "tempering" method
to study the kinetics of helium emanation. Possible structural trans-
formations of the studied minerals during their annealing were checked
by differential thermal analysis. Uranium analyses were performed by
O. A. LEVCHENKOV. It was found that minerals of the phosphate class
are characterized by a high activation energy for the emanation of the
major part of xenon (> 120 kcal/mole). Metamictization of the ini-
tial crystalline structure results in the appearance of weakened struc-

1/2

ASHKINADZE, G. SH., Geokhimiya, No 1, Jan 70, pp 104-111

ture sections, from which gas emanation occurs at lower activation energies (66 and 14-26 kcal/mole). The titano-tantalo-niobates studied are metamict (according to DTA data). During their annealing gas emanation takes place in two stages, viz. a low-temperature stage (temperature $< 750^\circ$ C), in which the minerals are in the metamict state and the gas emanation activation energy is > 60 kcal/mole, and a high-temperature stage (temperature $> 750^\circ$ C), in which the metamict state is annealed and the gas emanation activation energy is $>$ 60 kcal/mole.

2/2

TITLE--THE INFLUENCE OF HYPERCOAGULATION ON THE DURATION OF LIFE OF CR
 PRIME51 LABELLED ERYTHROCYTES -U-
AUTHOR-(02)-ASHKINAZI, I.YA., DRICHKO, V.F.

COUNTRY OF INFO--USSR   A

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
 NR 3, PP 46-49
DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD COAGULATION, CHROMIUM ISOTOPE, TAGGED ATOM, ERYTHROCYTE,
 RABBIT, HEMOLYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1982/0850   STEP NO--UR/0219/70/049/003/0046/0049

CIRC ACCESSION NO--AP0052284
                            UNCLASSIFIED

CIRC ACCESSION NO--AP0052284

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPEATED ACTIVATION OF THE
INTRINSIC COAGULATION IN RABBITS BY INTRAVENOUS INJECTION OF A
SUSPENSION OF DIATOMITE AND ACTIVATED PLASMA IN A NUMBER OF EXPERIMENTS
RESULTED IN A DISTINCT SHORTENING OF THE DURATION OF LIFE OF CR PRIME51
LABELLED ERYTHROCYTES. IN THE PATHOGENESIS OF HEMOLYSIS, ALONG WITH THE
EFFECT OF THE MECHANICAL FACTOR, A PROMINENT ROLE IS, APPARENTLY, PLAYED
BY SECONDARY ALTERATION OF THE MEMBRANE OF CIRCULATING ERYTHROCYTES AS
THE RESULT OF MOBILIZATION OF THE THROMBOPLASTIN FACTOR.

UNCLASSIFIED

1/2   017   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--THE INFLUENCE OF ACTIVATED HAGEMAN'S FACTOR ON THE BLOOD
   COAGULATION SYSTEM IN VIVO -U-

AUTHOR-(02)-ASHKINAZI, I.YA., KLEMINA, I.K.

COUNTRY OF INFO--USSR

SOURCE--BYULLETIN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
   NR 4, PP 32-36
DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD COAGULATION, RABBIT, BLOOD PLASMA, PROTHROMBIN,
   FIBRINOLYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1594   STEP NO--UR/0219/70/069/004/0032/0036

CIRC ACCESSION NO--AP0106340
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0106340
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS STAGED ON RABBITS
THE AUTHORS UNDERTOOK IN VIVO STUDIES OF THE BLOOD COAGULATION SYSTEM IN
DIATOMITE ACTIVATION OF HAGEMAN'S FACTOR, AS WELL AS IN THE
ADMINISTRATION OF ACTIVATED PLASMA. UNDER THE INFLUENCE OF THE REFERRED
TO EFFECTS THERE WERE OBSERVED A MARKED ACCELERATION OF COAGULATION OF
"SILICONE" BLOOD (PLASMA), A SHORTENING OF R AND K INTERVALS OF THE
THROMBOELASTOGRAM OF RECALCIFIED PLASMA WITH INCREASE OF THE ALPHA
ANGLE, INTENSIFICATION OF PROTHROMBIN UTILIZATION. HYPERCOAGULATION WAS
MORE REGULAR IN DIATOMITE ADMINISTRATION AND WAS ATTENDED IN A NUMBER OF
EXPERIMENTS BY THE DEVELOPMENT OF A MODERATELY MARKED COAGULOPATHIA OF
UTILIZATION (REDUCTION OF THE BLOOD CONTENT OF I, V, VIII FACTORS).
NOTWITHSTANDING THE APPEARANCE IN THE CIRCULATION OF ACTIVATED HAGEMAN'S
FACTOR, NO REGULAR INTENSIFICATION OF FIBRINOLYSIS WAS OBSERVED, THIS
TESTIFYING TO RE EVALUATION OF THE ROLE OF THIS FACTOR IN THE MECHANISM
OF FIBRINOLYSIS INTENSIFICATION IN VIVO.

USSR   UDC: 543.42-547.241

EPSHTEYN, L.M., NOVIKOVA, Z.S., ASHKINADZE, L.D., RUBASHEVA, L.M., KAZITSYNA, L.A.,
Institute of Organo Elemental Compounds, Moscow, Academy of Sciences USSR

"Spectral Investigation of the Electron-Donor Capacity of Triethyl Phosphite as a
Method of Evaluating the Purity of Phosphites"

Abstract: When ethanol forms a hydrogen bond with triethylphosphite, the absorp-
tion band for the H-complex (3560 cm^{-1}) has a secondary peak at about 3480 cm^{-1}.
It was found that the assymetry of the absorption band is due to a slight admixture
of triethylphosphate. The amount of impurity was determined by studying the
ternary triethylphosphite-triethyl-phosphate-ethanol system. The spectral method
used for quantitative determination can detect a phosphate impurity of the order
of 0.005 M/l in the H-complex. A study of the electron-donor capacity of triethyl-
phosphite and its carbon analog orthoformic ether as compared with H-acids showed
that the integral intensity of the band of the H-complex of ethanol with triethyl-
phosphite is less than with orthoformic ether. The frequency shifts as compared
with γ_{OH} of free ethanol are 82 and 87 cm^{-1} respectively. A similar pattern
is observed when a stronger proton donor -- trifluoroethanol -- is used. The
reasons for the reduction in the proton acceptor properties of triethylphoephite
as compared with its carbon analog are now being investigated.
1/1

1/2   031   UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--SPECTRAL STUDY OF THE ELECTRON DONOR CAPACITY OF TRIETHYL PHOSPHITE
  AS A METHOD FOR EVALUATING THE PURITY OF PHOSPHITES -U-
AUTHOR-(05)-EPSHTEYN, L.M., NOVIKOVA, Z.S., ASHKINADZE, L.D., RUBASHEVA,
  L.M., KAZITSYNA, L.A.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 689-90

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTRON DONOR, ALKYL PHOSPHITE, CHEMICAL PURITY, HYDROGEN
  BONDING, COMPLEX COMPOUND, ABSORPTION BAND SPECTRUM, ETHANOL,
  FLUORINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0082   STEP NO--UR/0062/70/000/003/0689/0690

CIRC ACCESSION NO--AP0125916
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0125916
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINCE THE FORMATION OF H BOND
BETWEEN ETOH AND P(OET) SUB3 RESULTS IN A H COMPLEX WHICH GIVES AN
ABSORPTION BAND AT 3560 CM PRIME NEGATIVE1 WITH A SHOULDER AT 3480 CM
PRIME NEGATIVE1 (E., ET AL., 1969) THE APPEARANCE OF THE LATTER HAD BEEN
SUGGESTED TO BE THE RESULT OF 2 TYPES OF SUCH COMPLEXES. HOWEVER SUCH A
SHOULDER MAY BE CAUSED BY A SMALL ADMIXT. OF ET SUB3 PO SUB4 WHICH
CANNOT BE DETECTED BY THE SPECTRAL METHOD DIRECTLY. CAREFULLY PURIFIED
P(OET) SUB3 AND ETOH GAVE AN IR SPECTRUM IN WHICH THE HO BAND WAS
SYMMETRIC, BUT A BRIEF CONTACT WITH AIR RESULTED IN SHOULDER FORMATION
AT 3460 CM PRIME NEGATIVE1 AT THE FREQUENCY AT WHICH THE COMPLEX OF ETOH
AND ET SUB3 PO SUB4 HAS A BAND. TO EVALUATE THE SENSITIVITY OF THIS
BAND THE SUITABLE CALIBRATION RUNS WERE MADE AND ET SUB3 PO SUB4 AT 0.07
MOLES-L. RESULTS IN THE SHOULDER OF THE BAND AT 1280 CM PRIME NEGATIVE1
WHILE AT 0.01-0.02 MOLES-L. THIS CAN NO LONGER BE OBSERVED, BUT THE
ASYMMETRY OF THE 3460 CM PRIME NEGATIVE1 BAND IS STILL CLEARLY VISIBLE.
CF SUB3 CH SUB2 OH IN PLACE OF ETOH ALLOWED SPECTROSCOPIC DETECTION OF
ET SUB3 PO SUB4 EVEN AT 0.005 MOLES-L. THE INTEGRAL INTENSITY OF THE
BAND OF THE COMPLEX OF ETOH WITH P(OET) SUB3 (3 TIMES 10 PRIME4 L. M
PRIME NEGATIVE1 CM PRIME NEGATIVE1) WAS SMALLER THAN THAT OF ETOH WITH
HC(OET) SUB3 (3.5 TIMES 10 PRIME4); CF SUB3 CH SUB2 OH GAVE SIMILAR
RESULTS. THUS P(OET) SUB3 IS LESS EFFECTIVE ELECTRON DONOR IN RESPECT TO
ALCS. THAN IS HC(OET) SUB3.   FACILITY: INST. ELEMENTOORG.
SOEDIN, MOSCOW, USSR.

UNCLASSIFIED

USSR   UDC 539.4:624

SHAPIRO, G. A., SIMON, Yu. A., ASHKINADZE, N. G., GORLOVA, E. S.,
PARUSHKIN, A. K.

"Experimental Study of Earthquake Resistance of Residential Buildings of
Sawn Limestone on Southern Shore of Crimean Using Vibration Machines"

Translation: Vibration tests and certain additional studies have shown that
large-block construction of large (two-row) sections can cope successfully
with dynamic loads, which, in combination with reinforced concrete walls
in stairwells, assures earthquake resistance of the buildings tested with
a double reserve for level eight loadings.

1/1

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USSR

ASHKINUZE, V. G. and KATSEVA, V. P.

"Heuristic Methods in Computer Modeling of the Process of Proof of Geometric Theorems"

Vopr. Algoritmiz. i Programmir. Obuch. [Problems of Algorithmization and Programming of Learning -- Collection of Works], No 2, Moscow, Pedagogika Press, 1973, pp 111-117 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V803).

Translation: Problems of the expansion of heuristic aspects of programs modeling the search for proof of theorems from elementary geometry on computers are discussed. Heuristic methods are divided into syntactical and semantic on the basis of the nature of the information used in the solution of the problem. Heuristic methods based on information related only to the formal system itself are called syntactic methods; heuristic methods based on information relating also to the model of the system (or to the model alone) are called semantic methods. Heuristic limiting methods (excluding certain search areas from analysis as unpromising) and guiding methods (indicating the directions in which search should first be performed) are also distinguished.

V. Mikheyev

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USSR   UDC: 681.3.06:51

ASHKINUZE, V. G., POTAPOV, B. I.

"The 'Nyanya' and 'Kontrol'' Debugging Programs"

Translation: A detailed description is given of the NYaNYa and KONTROL'
debugging programs. The purpose of these programs is to give the pro-
grammer detailed information on the operation of his program or sepa-
rate fragments of that program. The proposed programs are accommodated
in cells from 1000 to 1777 of the first array of the core store, and are
designed for operational debugging. Upon completion of debugging, the
conclusive information is printed out. Provision is made for self pro-
tection of the debugging programs from impairment by the main program.
NYaNYa twists the debugged program or its individual sections and prints
out information concerning commands of interest to the programmer on these

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ASHKINUZE, V. G., POTAPOV, B. I., Tr. 3-y Zimney shkoly po mat. program-mir. i smezhnym vopr., 1970. Vyp. 1, Moscow, 1970, pp 70-92

sections. The rate of twist without printout is 160 commands per second. The rate of printout is ≈ 2 commands per second. Its information structure ensures maximum selectivity of the output information. There is an abbreviated version of NYaNYa-2 which operates with information preset from the panel. At certain points of the program being debugged, KONTROL' compares the results obtained by this program with predetermined standards, and after detecting an error, organizes twisting of this section (by means of NYaNYa). I. Shelikhova.

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1/2   020   UNCLASSIFIED   PROCESSING DATE--09OCT70
TITLE--EFFECT OF STORAGE TIME, TYPE OF FILLERS, AND PACKAGING ON THE
   STABILITY OF THE PREPARATION BIOVIT -U-

AUTHOR--ASHKINUZI, Z.K.

COUNTRY OF INFO--USSR

SOURCE--FERMENT. SRT. PROM. 1970, 36(1), 17-19

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TETRACYCLINE, CEREAL CROP, COBALT COMPOUND, CALCIUM COMPOUND,
   VITAMIN B COMPLEX, ANIMAL HUSBANDRY, FOOD STORAGE, CHEMICAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/1709   STEP NO--UR/0071/70/036/001/0017/0019

CIRC ACCESSION NO--AP0103475
                         UNCLASSIFIED

CIRC ACCESSION NO—AP0103475

ABSTRACT/EXTRACT—(U) GP-0- ABSTRACT. BIOVIT IS FEED GRADE BIOMYCIN (CHLORTETRACYCLINE) (I). MIXTS. WERE PREPD. WITH WHEAT AND CORN FLOURS, $CoCl_2$, $Ca(OAc)_2$, AND BENZYL THIOCYANATE WITH 10-80 G I-KG MIXT. THE EFFECT OF PACKAGING WAS INVESTIGATED. BECAUSE OF THE MANNER OF PREPN. I IS ALWAYS ACCOMPANIED BY VITAMIN B $SUB12$. DURING 30 MONTHS OF STORAGE THE AMT. OF I CHANGES INSIGNIFICANTLY, SMALLER THAN 5PERCENT, IRRESP. OF THE FILLERS AND WRAPPERS USED, BUT THE AMT. OF VITAMIN B $SUB12$ DROPS BY 30-70PERCENT. I STORED LARGER THAN 6 MONTHS SHOULD CONTAIN ADDED VITAMIN B $SUB12$, IF IT IS INTENDED TO BE THE MAIN SOURCE OF THIS VITAMIN FOR THE ANIMALS.

UNCLASSIFIED

USSR

ASHKINYZE, V. G. and KATSEVA, V. P.

"Computer Modeling of the Process of Proof of Geometric Theorems"

Vopr. Algoritmiz. i Programmir. Obuch. [Problems of Algorithmization and Programming of Learning -- Collection of Works], No 2, Moscow, Pedagogika Press, 1973, pp 89-110 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V802).

Translation: An algorithm and program for the BESM-4 computer are described, modeling the process of solution of geometric problems requiring proof. The given class of problems is formally described as follows. It is assumed that a certain finite set M is given (as a universal set -- the universum). It is also assumed that certain subsets $A \subseteq M$ are set in corresondence with certain elements; one subset may correspond to various elements. The problem is the pair $(D, \bar{X})$, where $D \subseteq M$ is a subset, the elements of which are called given elements of the problem, while $X \subseteq M$ is called the desired element. The program described is designed to prove theorems relating to a certain fragment of elementary geometry; this fragment includes the theory of equality of triangles and the theory of parallels. The language of the program contains 15 types of statements used in the proof of theorems from this section of

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geometry. A continous listing of all formally possible versions to achieve each goal is practically impossible, even in simple geometric problems. In order to reduce the list, a drawing is used -- a coordinate model of the problem. However, even when the drawing is used heuristically, the volume of the list which must be run through for selection of a goal is too great in complex problems: it is never known when the listing can be interrupted and an attempt judged unsuccessful. The program described allows the depth of the runthrough to be externally limited (assignment of maximum resolved level in the tree of the problem). It is noted that the program of proof of the geometric theorems allows quantitative estimation of the relationship between elements of logic and clarity in elementary geometry proofs: of all conditions of the "axioms" of this program, some 40% are statements based solely on references to the drawing.   y. Mikheyev

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Electromagnetic Wave Propagation

ASHKONAZI, D. Ya., BELYAYEV, V. P., BRODULENKO, G. I., DOBANOV, N. P., RULEV, S. O.

"Starting Losses in SHF Dischargers"

Translation: An experimental study was made of the power dissipated in the discharge as a function of the transmitter pulse duration for an electrodeless discharger with double dielectric walls. Measurements were taken on two different wavelengths in the decimeter band; the dischargers had a different height in each of these cases. The dissipated power was measured with an air calorimeter. The results show a high proportion of starting losses (up to half the dissipated power). This means that the process of growing electron concentration in the discharge continues considerably longer than the process of growing current determined by the wave impedance of the waveguide channel. Three illustrations, bibliography of two titles. N. S.
1/1

USSR   UDC: 666.638.678.027.5

SOKOLOVA, M. A., MERKUSHEV, O. M., NEYMAN, M. I., ASHKRUMOVA, A. Yu.,
SVERDLOVA, A. N.

"A Ceramic Suspension for Making Thin-Film Capacitors"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 16, Jun 71, Author's Certificate No 303663, Division H, filed 31 Jan 69,
published 13 May 71, p 187

Translation: This Author's Certificate introduces a ceramic suspension for
making thin-film capacitors which is based on an organic solvent. As a dis-
tinguishing feature of the patent, a dielectric coating with a dense struc-
ture is produced by taking the initial components in the following quanti-
tative ratios (in parts by weight): ceramic material--10-20, acetone--
30-60, ammonium acetate--0.1-0.5, and the remainder amylacetate--up to 100
parts by weight of the total.

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USSR

ASHMAN, A. Ye., KRUPSKIY, A. A.

"Characteristic Properties of Magnetic Memory Elements as Functions of their Structure"

Moscow, Magnitnyye Elementy Pamyati, 1972, pp 10-19.

Abstract: The characteristic properties of magnetic memory elements were studied as functions of their structure, as applicable to the problem of storage and readout of information. Among these properties are the method of storage of information (magnetic parameter used to differentiate 1 and 0 states, as well as the range of permissible changes of the magnetic state of an information magnetic circuit), nature of difference of 1 and 0 signals, nature of reading. The structure also influences the quantitative parameters of the elements. The study was performed using elements with minimal structure, divided into three classes: those with modulation of the information flux, with controlling information flux, and with flux switching. The flux-switching elements are described most completely. It is demonstrated that the characteristic properties and parameters depend on the type of relationship between functionally separate magnetic circuits in the core of the element. For example,

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Ashman, A. Ye., Krupskiy, A. A., Moscow, Magnitnyye Elementy Pamyati, 1972,
pp 10-19.

the possibility of producing 1 and 0 output signals of different polarity is
determined by the relationship between the interrogation and working magnetic
circuits, the possibility of nondestructive readout -- by the relationship
between the interrogation and information magnetic circuits. The relationship
between the information and working magnetic circuits determines the noise
level of the element. A table is presented in which these properties are
systematized according to the structural classification of elements.

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USSR   UDC 681.327

ASHMAN, A. Ye.

"Memory Cells"

USSR Author's Certificate No 271581, filed 29 Jul 68, published 28 Aug 70
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 6,
Jun 71, Abstract No 6 B281 P)

Translation: A well-known memory cell containing a magnetic circuit with
three parallel branches is introduced. The two extreme branches have two
modulation outlets. The cell is critical with respect to scattering of the
geometric dimensions and magnetic characteristics of the magnetic circuit,
and it requires high control currents. The proposed memory cell is dis-
tinguished by the fact that the middle branch of the magnetic circuit has
a pair of modulation holes; the write winding encompasses one branch, the
output winding, and another branch; and the interrogation winding passes
through all three pairs of modulation holes. The forbid winding, which is
part of the interrogation winding, passes through the modulation holes of
the two branches encompassed by the write winding and the output winding.
There are 3 illustrations.
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USSR

ASHMANOV, S. A., BRONSHTEYN, M. A.

"Simple Polyverbal Operations"

Abstract: The paper is devoted to construction and investigation of a new series of neutral polyverbal Maltzevian operations on groups -- so-called simple operations, including all those which satisfy Maltzev's postulate. The authors define the new series in such a way as to cover all known polyverbal Maltzevian operations. The properties of simple operations are defined, and it is shown that the set of all neutral polyverbal Maltzevian operations has the power of the continuum. It is also proved that all different Maltzevian operations (not necessarily polyverbal) form a set. A continuum of polyverbal Maltzevian operations which are not simple is constructed. The authors thank O. N. Golovin for interest in the work. Bibliography of 15 titles.

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USSR   UDC: 621.378.385

ASHMARIN, I. I., BYKOVSKIY, Yu. A., DEGTYARENKO, N. N.,
YELESIN, V. F., LARKIN, A. I., SIPAYLO, I. P., Moscow Physical
Engineering Institute

"Pulse Holography Study of Gas Breakdown in Front of a Laser
Beam"

Abstract: The paper is devoted to a study of phenomena which
take place in air and in helium at different pressures when
the output from a ruby laser is focused on lead, copper, and
aluminum targets.   The method of pulse holography is used for
these purposes.   The efficacy of the holographic method for
studying these phenomena is demonstrated.   It is observed that
the axis of symmetry of the beam at atmospheric pressure
deviates from the normal to the target in the case of oblique
incidence of the laser beam.   This effect can be attributed

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to localized absorption of the energy of laser emission on
the boundary of the beam. It is found that the effect of the
laser beam on the probability of gas breakdown in front of
the target can be attributed to the ionizing action of ultra-
violet radiation. An investigation of the way that the mag-
nitude of the effect depends on the target material and the
composition of the ambient gas confirms this hypothesis.
The authors thank D. M. Samoylovich and R. V. Ryabov for
furnishing the photographic materials and for constructive
criticism. Nine figures, one table, bibliography of 14 titles.

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USSR   UDC 577.12:576.12:155.3

ASHMARIN, I. P., Leningrad University

"Neurological Memory as a Possible Evolutionary Product of Other Forms of
Biological Memory"

Abstract: The author advances a theory whereby the bearer of genetic memory
is a single cell, regardless of the complexity of the organism. In a multi-
cellular organism, numerous lymphoid cells related by common origin and
function store immunological memory. Assemblies of neurons stably joined
to one another are bearers of neurological memory. Immunological memory,
though qualitatively different from the genetic memory, includes the mech-
anisms of the latter. Neurological memory is much more complex than immuno-
logical memory and apparently includes certain of its mechanisms. In support
of this theory, the author posits the existence in brain tissue of an iso-
lated system capable of elaborating antibodies to synaptic membrane antigens.
When the synapses are functioning, these antigens are produced in excess
and they escape from the neuron, causing antibody formation and closure
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of the corresponding synapses. The phenomenon of transfer of habits by brain
extracts is regarded as the consequence of transfer of excess antigens from
functioning synapses or as the transfer of compounds that are precursors
of these antigens.

USSR

UDC 615.779.9

ASHMARIN, I. P., ZHDAN-PUSHKINA, S. M., KOKRYAKOV, V. I., SAMEDOV, A., Sh., and ANTONOVA, S. N., Leningrad State University

"Antibacterial and Antiviral Functions of Basic Cellular Proteins and Prospects for Their Practical Use"

Abstract: After noting the functions of basic proteins in chromatin, ribosomes, lysosomes, etc., the authors review the literature and their own research on the role of these proteins in the mechanism of protection against infection and on their antibiotic activity in vitro and in vivo. Results of studies on the tolerance of animals for the basic proteins following a single or prolonged parenteral administration of various histone fractions are summarized. The use of histones combined with antibacterial and antiviral agents with limited ability to penetrate certain cellular and tissue membranes is regarded as a promising clinical approach. Positive results have been obtained in treating tuberculosis in guinea pigs and mice with isoniazid and histones. The effective doses of isoniazid could be reduced five-fold when combined with certain histone fractions. Histone fractions were also efficacious in the treatment of herpetic keratitis.
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UDC 615.779.9

ASHMARIN, I. P., ZHDAN-PUSHKINA, S. M., KOKRYAKOV, V. I., SAMEDOV, A., Sh., and ANTONOVA, S. N., Leningrad State University

"Antibacterial and Antiviral Functions of Basic Cellular Proteins and Prospects for Their Practical Use"

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MATYUSHICHEV, V. B., and ASHMARIN, I. P., Leningrad State University

"Concentration and Storage of Preparations of 026 Coliphage"

Moscow, Voprosy Virusologii, No 5, 1971, p 623

Abstract: The effectiveness of some chemical methods of precipitating bac-
teriophages by concentrating lysates of 026 coliphage were compared. The
maximum effect was achieved by precipitating virus with 2.0 to 2.3 M am-
monium sulfate. A centimolar solution of magnesium sulfate in an 0.9%
NaCl solution is recommended as a protein-free stabilizing diluent for
resuspending phage precipitates.

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ASHMARIN, I. P.

This book by I.P. Ashmarin, N.N. Vasil'yev, and V.A. Ambrosov is small in size but considerable in content, and is intended for a wide circle of biochemists, microbiologists, and biologists in other specialties, and has as its purpose to acquaint the readers with express methods of statistical data processing. It also deals with mathematical planning of experiments, which is still a little developed but very important area of scientific experimentation in biology and medicine.

The book consists of three sections. The first presents in concise form practical procedures for rapid statistical processing of experimental data. The reader learns about the methods of processing variation series of fractions, choice of type of mean value, and the technique for calculating the most complex mean, the geometric mean. We were impressed by the rapid method of testing for the presence in a set of "elusive" variants by calculating ratios, where the numerator indicates the difference between the "suspected" elusive extreme variant and the variant that precedes it, and the denominator indicates the difference between the largest and smallest variants in the set.

The authors make an interesting remark to the effect that "with more than four variants it is often possible to work with the median as the average characteristic of ours theoretically subject to processing using the geometric mean" (p 10). However, the authors do not decode these not uncommon instances, which is a regrettable omission. They recommend an express method to evaluate variation of data and confidence interval bounda-ries when there is a small number of observations, on the basis of determining the spread of variations using a special coefficient, K, already computed by the authors for a reliability level of 95 and 99 percent, which

*Byustryye Metody Statisticheskoy Obrabotki i Planirovaniye Eksperimentov (Rapid Methods for Statistical Processing and Planning of Experiments), Leningrad University Publishing House, 1971, 80 pp., by I.P. Ashmarin, N.N. Vasil'yev, V.A. Ambrosov.

TITLE--EFFECT OF HISTONES AND ACTINOMYCIN D ON RNA SYNTHESIS IN BRAIN -U-

AUTHOR-(02)-ASHMARIN, I.P., AVENIROVA, YE.L.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 2, PP 137-139

DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, RNA, BIOSYNTHESIS, ANTIBIOTIC, PROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0829   STEP NO--UR/0301/70/016/002/0137/0139

CIRC ACCESSION NO--AP0102791
                         UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0102791

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTRACEREBRAL ADMINISTRATION OF
ACTINOMYCIN D INTO MICE INHIBITS URIDINE AND OROTIC ACID INCORPORATION
INTO RNA BY 62-79PERCENT I H AFTER INJECTION OF DRUG. AS DISTINCT FROM
ACTINOMYCIN D F SUB1 FRACTION OF THYMUS HISTONES DOES NOT INHIBIT RNA
BIOSYNTHESIS IN BRAIN.   THE LACK IN INHIBITORY ACTION OF HISTONES ON
RNA SYNTHESIS MAKES IT POSSIBLE THAT THE SITE OF HISTONES ACTION IN
BRAIN TISSUE CELLS IS NOT THE CHROMATINE BUT OTHER STRUCTURES POSSIBLY
THE MEMBRANES.

UNCLASSIFIED

1/2   018   UNCLASSIFIED   PROCESSING DATE--20NOV70
TITLE--POSSIBLE RECONSTRUCTION OF CHROMATIN AFTER DISSOCIATION IN SALT
SOLUTIONS -U-
AUTHOR-(02)-ASHMARIN, I.P., FEDOROVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--TSITOLOGIYA 1970, 12(3), 336-42

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHROMATIN, RAT, LIVER, DNA, DIALYSIS, PROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0426   STEP NO--UR/9053/70/012/003/0338/0342

CIRC ACCESSION NO--AP0127997
                    UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0127997
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FRACTIONS OF BOTH NATIVE AND
RECONSTRUCTED CHROMATIN ISOLATED FROM RAT LIVER AFTER ULTRASONIC
TREATMENT WERE FRACTIONATED ON A SEPHADEX G-200 COLUMN. PROTEIN
DISSOCN. FROM NATIVE CHROMATIN OCCURRED IN 2.5M NACL. PROTEIN
RECOMBINATION WITH DNA WAS ACCOMPLISHED BY MEANS OF STEPWISE DIALYSIS.
BOTH PHOSPHOPROTEIN CONTENT AND OPTICAL ABSORPTION AT 230 AND 260 MMU
WERE THE SAME IN FRACTION OF NATIVE AND RECONSTRUCTED CHROMATIN.
FACILITY: DEP. BIOCHEM., LENINGRAD UNIV., LENINGRAD, USSR.

UNCLASSIFIED

TITLE--ANALYSIS OF TUMOR TRANSFORMATION OF TISSUES. II. BIOCHEMICAL
  DEDIFFERENTIATION OF TISSUE DURING CARCINOGENESIS, CHANGES OF CREATINE
AUTHOR-(05)-SALYAMON, L.S., ASHMARIN, I.P., OSTRETSOVA, I.B., LYZLOVA,
  S.N., PLUZHNIKOVA, G.F.
COUNTRY OF INFO--USSR

SOURCE--TSITOLOGIYA 1970, 12(1), 102-10

DATE PUBLISHED---------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, TISSUE PHYSIOLOGY, CELL PHYSIOLOGY, ENZYME ACTIVITY,
  CARCINOGEN, CARBON TETRACHLORIDE, LEAD COMPOUND, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/2107   STEP NO--UR/9053/70/012/001/0102/0110

CIRC ACCESSION NO--AP0127480
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0127480

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CREATINE KINASE (I) AND ALK. PHOSPHATASE (II) ACTIVITY WAS STUDIED IN TRANSPLANTABLE TUMORS (HEPATOMA 22A IN C SUB3 HA MICE, HEPATOMA 27 AND KIDNEY TUMOR AB-12 IN RATS) AND TISSUES OF MICE AND RATS ADMINISTERED CARCINOGENIC COMPDS. (CCL SUB4, PB(OAC)SUB2, URETHANE AND 3,4,BENZO(ALPHA) PYRENE). I ACTIVITY WAS INCREASED 3 FOLD IN HEPATOMA 27 AND 5-10 FOLD IN HEPATOMA 22A. IT INCREASED ALSO UP TO 2 FOLD DURING THE HEPATOCARCINOGENESIS IN MICE AFTER CCL SUB4 ADMINISTRATION. AFTER THE ADMINISTRATION OF 3,4,BENZO(ALPHA)PYRENE, I ACTIVITY IN SKELETAL MUSCLES DECREASED TO 56PERCENT OF THE NORMAL VALUE WITHIN 26 DAYS AND A SIMILAR DECREASE WAS FOUND IN KIDNEYS OF RATS ADMINISTERED PB ACETATE. HOWEVER, I ACTIVITY IN THE LIVER WAS INCREASED. II ACTIVITY IN THE LIVER OF MICE ADMINISTERED CCL SUB4 INCREASED UP TO 3 FOLD DURING THE 1ST FEW DAYS THEN RETURNED TO NORMAL VALUES. PB ACETATE CAUSED A DECREASE IN II ACTIVITY IN THE KIDNEY AND KIDENY TUMORS. AFTER THE ADMINISTRATION OF URETHANE, II ACTIVITY IN THE LIVER INCREASED. IT WAS CONCLUDED THAT CHEM. CARCINOGENESIS IS ACCOMPANIED BY REPRESSIONS AND DEREPRESSIONS OF GENES REGULATING THE SYTHESIS OF ENZYMES IN CERTAIN TISSUES.
FACILITY: LAB. PATHOL. PHYSIOL. TUMOR GROWTH, INST. ONCOL., LENINGRAD, USSR.

UNCLASSIFIED

TITLE--USE OF TRANQUILIZERS IN DERMATOLOGICAL PRACTICE -U-

AUTHOR-(03)-ASHMARIN, YU.YA., SHATOVA, L.I., RYBAK, E.L.

COUNTRY OF INFO--USSR

SOURCE---VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 6, PP 6-12

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DERMATOLOGY, TRANQUILIZER, NEUROSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1381　　　　STEP NO--UR/0206/70/000/006/0006/0012

CIRC ACCESSION NO--AP0133333
UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70

CIRC ACCESSICN NO--AP0133333

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE COMPLEX THERAPY OF PATIENTS WITH DERMATIC DISEASES THE AUTHORS USED CERTAIN CURRENT PSYCHOTROPIC DRUGS (TRANQUILIZERS). OVER 300 PATIENTS WERE GIVEN TREATMENT. BOTH MAJOR TRANQUILIZERS (PHENOTHIASINE DERIVATIVES) AND MINOR TRANQUILIZERS (MEPROBAMATE, TRIOXASINE, ELENIUM, SEDUXIN) WERE USED. THESE DRUGS WERE FOUND TO BE MOST EFFECTIVE IN PATIENTS WITH DERMATIC DISEASES WITH PERSISTENT ITCHING, CONCURRENT NEUROTIC AND NEURASTHENIC CONDITIONS WITH MANIFESTATIONS OF RESTLESSNESS, INSOMNIA. TRANQUILIZERS ARE EFFECTIVE IN TREATMENT OF SYPHILOPHOBIA.   FACILITY: GLAVNYY KLINICHESKIY VOYENNYY GOSPITAL' IM. BURDENKO, MOSKVA.

UNCLASSIFIED

USSR

ASHMENSKAS, YU. I.

UDC 615.917

"Variation of the Total Protein and Protein Fractions of the Blood Serum under the Effect of Sevin, Cineb, Ciram and Maneb"

V sb. Vopr. epidemiol. i gigiyeny v LitSSR (Problems of Epidemiology and Hygiene and the Lituanian SSR -- collection of works), Vil'nus, 1971, pp 165-169 (from RZh-Farmakologiya. Khimiterapevticheskiye sredstva. Toksikologiya, No 2, Feb 72, Abstract No 2.54.797)

Translation: Sevin (I; 2 mg/kg), cineb (II; 10 mg/kg), ciram (III; 2.5 mg/kg) and maneb (IV; 0.75 mg/kg) were administered internally to rats ♂ ♂ WAY for 9 months. No changes in the total protein level were observed. The I-IV caused a reduction in the albumin content and an increase in the content of all globulin fractions. These shifts disappeared 4 months after cessation of poisoning by II and IV (but not I and III).

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USSR

UDC [537.226+537.311.33]:[537+535]

ASHMONTAS, S. P., POZHELA, YU. K., and REPSHAS, K. K.

"Bigradient Electromotive Force of Hot Current Carriers"

Translation: The article presents experimental results of the investigation of the bigradient electromotive force of hot current carriers: i.e., the electromotive force appearing in a homogeneous semiconductor specimen on the creation therein of two different gradients of the warming electric field. Such warming up was brought about by the special shape of the specimen. Investigations were conducted on n-Ge specimens at room temperature by the microwave method and the d-c pulse method. The authors obtained the dependence of the bigradient electromotive force of hot current carriers on the strength of the electric microwave field in a wave guide.

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USSR

UDC: $[537.226+537.311.33] : [537+535]$

ASHMONTAS, S. P., POZHELA, Yu. K., and REPSHAS, K. K.

"Photogradient EMF of Thermal Current Carriers in Germanium and Silicon"

Translation: The results are given of an investigation into the photogradient emf of thermal current carriers in Ge (n and p type) and Si (n type) at $T_0 = 300^0$ K. In the case of n-Ge, a reduction was experimentally observed in the growth rate of the photogradient emf with the electric field intensity, beginning with fields of $E > 5000$ V/cm, which fact is explained by the effect of the non-equivalent $\langle 100 \rangle$ valleys on the electron heating. Computations of the photogradient emf were made with approximate electron and hole temperatures computed from equations of energy balance. Author's abstract

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USSR

UDC 541.67:543.422.4:547.1'118

SHAGIDULLIN, R. R., BEL'SKIY, V. YE., ASHRAFULLINA, L. KH., KUDRYAVTSEVA, L. A., IVANOV, B. YE.

"Study of Dipole-Dipole Interaction of Phosphoryl Compounds with the Environment by the Method of Infrared Spectroscopy"

Abstract: A study was made of the nature of the variation of the valence phosphoryl oscillation frequency $\nu_{P=O}$ in different media for phosphoryl compounds differing significantly with respect to dipole moments. The interaction with the environment of organophosphorus ethers, amides, acid chlorides and trialkyl (aryl) phosphine oxides having a phosphoryl group takes place by the same mechanism as the linearity of the variation of the valence oscillation frequency of the P=O bond under the effect of the environment indicates. The interaction of the phosphoryl compounds with the environment is intensified with an increase in their dipole moments which can be caused by an increase in the polarity of the P=O bond. The capacity of the phosphoryl compounds for interaction with the environment depends on the intramolecular effects of the substitutions on the phosphorus determined by the Taft induction constants.
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TITLE--DEGASSING DURING FRICTION IN VACUUM -U-

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE KINETICS OF DEGASSING
DURING DRY FRICTION IN VACUUM. THREE STAGES OF GAS SEPARATION WERE
DISTINGUISHED, TWO OF WHICH CORRESPOND TO THE WORK IN PROCESS, WHILE THE
THIRD CORRESPONDS TO STEADY STATE FRICTION. ON THE BASIS OF HYDROGEN
DEGASSING DURING FRICTION, IT IS SUGGESTED THAT THESE STAGES CORRESPOND
TO INITIAL BREAKDOWN OF THE OXIDE FILM, ITS ELIMINATION, AND FRICTION OF
PURE SURFACES, RESPECTIVELY. FACILITY: AKADEMIIA NAUK
UKRAINSKOI SSR. FACILITY: FIZIKO-TEKHNICHESKII INSTITUT NIZKIKH
TEMPERATUR, KHARKOV, UKRAINIAN SSR.

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USSR

ASHURLY, Z. I., BABAYAN, V. G., YEMEL'YANOV, Yu. M., MOROZOVA, N. P.,
FEDOTOVA, T. A.

"Effect of the Frequency on the Ignition Voltage in an Ozonizer"

Moscow, Khimiya i Fizika Nizkotemperaturnoy Plazmy, Moscow University
Press, 1971, pp 121-125

Abstract: The authors investigate the ignition voltage as a function
of frequency in an ozonizer with a 3 mm discharge gap at frequencies of
50, 500, 1000, 2000, and 3000 Hz. The reactor was a flat ozonizer of
special design which fed the gas into the discharge zone of the ozonizer.
The dielectric barriers were glass plates ground on both sides 1 mm thick
and 100 mm in diameter with plexiglass rings glued to the edges to prevent
breakdown on the glass surface. Ground aluminum electrodes 70 mm in
diameter were applied to the glass plates. It was found that the ignition
voltage decreases from 6900 to 5300 volts when the frequency increases
from 50 to 3000 Hz. The experimental results agree satisfactorily with
theoretical calculations. Two figures, one table, bibliography of ten
titles.

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104667a   Calculation of the combustion temperature of na-
tural and liquified gases. Ashurov, S. A. (MINKh GP im.
Gubkina, Moscow, USSR). Gazov. Prom. 1970, 15(1), 32-4
(Russ). Heats of dissocn. of combustion products of natural
and liquified gases, as calcd. from the formula, $q_{diss} = 100Q_{diss}/$-
$(Q_{phys} + Q_{diss})$, where $Q_{diss} = 30.2\ CO + 25.8\ H_2 + 17\ OH +$
$9.6\ NO + 36.1\ H + 26.6\ O$, $Q_{phys} = \Sigma r_i c_i^{0-t}$, and c_i^{0-t} was the
heat capacity of the ith component in the temp. range from 0 to
t, decreased with increasing coeff. α of excess air and were 0.5%
higher than those calcd. with values for Q_{diss} and Q_{phys} which
neglected dissocn. products of HO and NO. The differences be-
tween q_{diss} for CH_4 and q_{diss} for C_4H_{10} and C_5H_{12} at 2100° were
~0.5 and 1.0%, resp. Tables of correction coeffs. $\phi = 1 - q_{diss}$
for calcg. the rated combustion temp. $t_r = \phi t_c$ from the calori-
metric combustion temp. t_c were prepd. for $\alpha = 1.15$ and 1.3.
                                                    Lucile S. Davison